

QIUYA XU

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EDUCATION

Cornell University, M.P.S. in Applied Statistics, Ithaca, NY GPA :**4.1/4.3 (A+)** *Aug.2013~May. 2014*

- ◇ Core courses: Statistical Data Mining; Database Management and SAS High Performance Computing with DBMS; Introduction to High Performance Computing Tools and Concepts Operations; Research Tools for Financial Engineering

Sun Yat-Sen University, B.S. in Statistics, Guangzhou, China GPA :**3.7/4** *Sep.2009~Jun.2013*

- ◇ Core courses: Machine Learning; Applied Regression Analysis; Mathematical Statistics; Statistical Inference etc.

SKILLS

Technically proficient in **SQL, R, Python, SAS** (Base SAS Certification: Nov 2013, Advanced SAS Certification: March 2014)

PROJECTS

Bad Categorization (Bad Cat) *Sep.2023~ now*

- ◇ Lead Bad Categorization (Bad Cat) projects to generate fee category classification for category-based fee (~ 70B WW)
- ◇ Improved the model's high-precision coverage WW by ~30%, defined as the portion of data where the model achieves $\geq 95\%$ precision.
 - ◇ Developed an automated annotation workflow (ATLAS) harnessing large language models (LLMs) to mimic human classification, which handles 82% of human annotation work load. The workflow employed a combination of pre-trained frozen and fine-tuned LLMs to automate both product identification and class assignment. The workflow achieves human-level accuracy (~97%).

Retrospective Estimate of Marketplace Intervention (REMI) *Sep. 2018~ Sep 2023*

- ◇ Used causal inference technique, synthetic control, to measure the impact of Amazon fee changes on key metrics such as units sold, revenue, selection with sales, and ad spend.
- ◇ Designed and implemented a workflow to parallelize impact measurement across multiple metrics and model specification by automatically provisioning EC2 instances, reducing the time required of a fee change analysis by 66%.

Android Browser Usage Model *May.2016~July 2016*

- ◇ Goal: predict Android 6 Marshmallow machines' browser traffic.
- ◇ Pair an android OS 6 machine with a non-6 machine according to a distance metrics based on common app count ratio and inherit the non-5's browser traffic. The error rate is within 7% for majority of top 500 entities on testing data.

Panel Health Research *July.2014~Dec.2014*

- ◇ Create a new measure, panel to census ratio, to measure panel collection completeness, which play an important role in receiving accreditation from the **Media Rating Council (MRC)** of Media Metrix.

Webpage Visitor Preference Modeling, Everyday Health *Jan.2013~May. 2014*

- ◇ Building a recommendation system for anonymous users to indicate which articles they are most likely to read the next
- ◇ Applied logistic regression and classification tree to predict the content category of the user's next click
- ◇ Utilized collaborative filtering to do the URL level recommendation
- ◇ Being the **technical-go-to person** in our team of four, playing a key role in method research and programming.

Single Nucleotide Polymorphism Detection Using Next-Generation Sequencing Data *Jan.2013~May.2013*

- ◇ Innovatively integrated sequencing error by assuming a Beta distribution.
- ◇ Utilized Expectation-maximization algorithm to calculate the maximum likelihood estimation of parameters.
- ◇ Adapted an empirical Bayesian method for genotype calling and reduced false positive rate by **70%**.
- ◇ The paper was selected as the **excellent graduation dissertation** of San Yat-sen University.

EXPERIENCE

Senior Data Scientist, **Amazon** *Jan.2017~ present*

- ◇ Launched Transformer-based product classification model worldwide, eliminating \$310M in absolute fee errors driven by incorrect fee category classification, benefiting 400K sellers.
- ◇ Use LLM for training label annotation. The solution can handle 82% of human annotation load while achieving human-level accuracy (~97%), and is language-agnostic.
- ◇ Applied causal inference techniques, including synthetic control, to evaluate the impact of fee changes. Automated the analysis workflow, reducing the time required to assess a single fee change by 66%.
- ◇ Developed Weekly Business Reviews (WBRs) for key merchant fulfilled programs to monitor critical metrics including buyable offers, glance views, conversion rates, adoption, and revenue.

Senior Data Analysis, **comScore Inc.** *Jul. 2014 ~ Jan.2017*

- ◇ **Mobile R&D:** Key player in Mobile Metrix R&D Team; Research on various methodology enhancement items; Analyst new data stream; Develop new methodology;
- ◇ **Mobile Processing:** Data QA for Mobile Metrix monthly processing; Develop auto-QA and data visualization tools

to improve QA efficiency and external communication.

- ◇ **Panel Health Research:** Applied statistical model to identify conflicting software and productionized weekly software check; Create a new way to measure panel collection completeness; Standardized healthy machine definition.